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Comments on “Population Aging and Economic Growth in Asia” by David Bloom, David Canning and Joycelyn Finlay

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The following are some comments. As the theory is simple, only serving the purposes of generating some testable hypotheses, I will focus on the empirical work.

1. A nice thing is that the author uses four different models in table 10.5—Tobit, Poisson, Probit, and OLS—all of which generate similar results.

2. The chapter uses several variables to examine the efficiency hypothesis. Some are better than others. Using the fact that married people have more children to support the efficiency hypothesis does not seem to be very good. The exact mechanism of how the traffic time affects fertility also deserves more explanations.

3. While education can be a good right-hand side variable, experience may not be. Having an additional child will affect labor supply of a woman in most economies, including Hong Kong. Also, the number of siblings seems to be a left-hand side variable rather than an explanatory variable.

4. House size is a very interesting variable. If the author can prove that housing price increases with house size in a convex way, then it is an interesting experiment to examine its impact on fertility.

Comment Roberto S. Mariano

This chapter seeks to identify significant factors affecting fertility choices; in particular, studying the causes of low fertility and childless families in Hong Kong. The theoretical framework is a variation of the Ehrlich-Lui model that accommodates zero fertility. The empirical evidence is based on the author's survey data. The chapter presents reasons to expect zero fertility, discusses a theoretical framework generating both demographic transition and corner solution for fertility, and performs an empirical analysis to verify the following testable hypotheses arising from the model:

- Total fertility rate (TFR) of the potential parent is negatively related to his or her human capital.
- If an adult likes children, it is less likely that he or she will have very few or no children.
- The parent's fertility rate is positively related to how efficient he or she is in educating his or her children.
- When a parent finds it costly to raise children, she will have fewer of them.

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In the chapter's empirical analysis, the main dependent variable is TFR, defined as actual number of children + expected number of future children. A Tobit model for TFR is estimated, based on HK survey data described in the appendix. Tobit is the appropriate model here since TFR is censored at zero. The explanatory variables used in the Tobit regression are:

- Years of schooling (squared schooling)
- Years of work experience (squared experience)
- Marital status
- Income
- Age
- Siblings
- Traffic time
- House size
- Eight dummy variables

In this empirical analysis, the author brings up the potential endogeneity of income. In the context of this study, it should be pointed out that income would be endogenous in the model not because of its correlation with other explanatory variables (e.g., schooling and experience), but rather because of its correlation with the error term in the Tobit model.

Furthermore, the explanatory variable SCHOOLING is a prime candidate to be endogenous—TFR affects SCHOOLING—and such endogeneity should be accounted for in the estimation of the Tobit model.

The chapter also studies a logit model for childless families. In a way, there is no need to do this. The estimated Tobit model delivers a more efficient estimate of the probability of the occurrence of childless families:

$$\Pr(y_i = 0) = \Pr(y_i^* < 0) = \Pr(e_i < -x_i'\beta).$$